

CLAIMS

We claim:

1. A locking apparatus for a gooseneck trailer hitch, the gooseneck trailer hitch having a tubular sheathing member, a stationary plate fixedly attached to the sheathing member, the stationary plate having a cavity for receiving a hitch ball and a flange with a first aperture for receiving a latch pin, a lock plate pivotally connected to the stationary plate, the lock plate having a second aperture for receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the retainer bracket having a central opening in which the flange of the stationary plate is slidably disposed, the retainer bracket further having a third aperture for receiving a latch pin, a handle guide depending from the sheathing member, a handle slidably disposed in the handle guide, the handle having a latch pin capable of insertion into the first aperture of the stationary plate and the third aperture of the retainer bracket to immobilize the lock plate in a closed position in which the second aperture of the lock plate is partially misaligned with the cavity of the stationary plate such that a hitch ball is prevented from being inserted into or removed from the cavity, said locking apparatus comprising:

a lock pin having a shaft and an eyelet, said shaft being capable of insertion into the central opening of the retainer bracket; and

a lock having a hasp, said lock being positionable in a locked position in which said hasp captures said eyelet and the handle of the gooseneck trailer hitch;

wherein, when said lock is in said locked position, said shaft is not removable from the central opening of the retainer bracket and the lock plate is substantially immobilized in the closed position.

2. The locking apparatus of claim 1 wherein said shaft has a diameter of about 7/16 inch.

1           3.     The locking apparatus of claim 1 wherein said shaft is substantially  
2 linear and has a length of about 4 inches.

3           4.     The locking apparatus of claim 1 wherein said shaft comprises a bend,  
4 the retainer bracket further comprises a fourth aperture providing access into the  
5 central opening of the retainer bracket, and said shaft is insertable through the  
6 fourth aperture into the central opening of the retainer bracket such that said bend  
7 prevents removal of said shaft from the retainer bracket when said lock is in said  
8 locked position.

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1           5.     A locking apparatus for a gooseneck trailer hitch, the gooseneck trailer  
2     hitch having a tubular sheathing member, a stationary plate fixedly attached to the  
3     sheathing member, the stationary plate having a cavity for receiving a hitch ball  
4     and a flange with a first aperture for receiving a latch pin, a lock plate pivotally  
5     connected to the stationary plate, the lock plate having a second aperture for  
6     receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the  
7     retainer bracket having a central opening in which the flange of the stationary  
8     plate is slidably disposed, the retainer bracket further having a third aperture for  
9     receiving a latch pin, a handle guide depending from the sheathing member, a  
10    handle slidably disposed in the handle guide, the handle having a latch pin capable  
11    of insertion into the first aperture of the stationary plate and the third aperture of  
12    the retainer bracket to immobilize the lock plate in a closed position in which the  
13    second aperture of the lock plate is partially misaligned with the cavity of the  
14    stationary plate such that a hitch ball is prevented from being inserted into or  
15    removed from the cavity, a cover plate depending from the sheathing member and  
16    enshrouding the handle guide, the cover plate having a first wall with a fourth  
17    aperture and a second wall with a fifth aperture generally aligned with the fourth  
18    aperture, said locking apparatus comprising:

19           a lock pin having a shaft and an eyelet, said shaft being capable of insertion  
20    through the fourth and fifth apertures of the cover plate; and

21           a lock having a hasp, said lock being positionable in a locked position in  
22    which said hasp captures said eyelet and the handle of the gooseneck trailer hitch;

23           wherein, when said lock is in said locked position, said shaft is not removable  
24    from the fourth and fifth apertures of the cover plate and the lock plate is  
25    substantially immobilized in the closed position.

26           6.     The locking apparatus of claim 5 wherein said shaft has a diameter of  
27    about 7/16 inch.

1           7.     The locking apparatus of claim 5 wherein said shaft is substantially  
2 linear and has a length of about 6 inches.

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1           8.     A locking apparatus for a gooseneck trailer hitch, the gooseneck trailer  
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the  
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball  
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally  
5 connected to the stationary plate, the lock plate having a second aperture for  
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the  
7 retainer bracket having a central opening in which the flange of the stationary  
8 plate is slidably disposed, the retainer bracket further having a third aperture for  
9 receiving a latch pin, a handle guide depending from the sheathing member, a  
10 handle slidably disposed in the handle guide, the handle having a latch pin capable  
11 of insertion into the first aperture of the stationary plate and the third aperture of  
12 the retainer bracket to immobilize the lock plate in a closed position in which the  
13 second aperture of the lock plate is partially misaligned with the cavity of the  
14 stationary plate such that a hitch ball is prevented from being inserted into or  
15 removed from the cavity, said locking apparatus comprising:

16           a lock comprising a body and a hasp, said hasp being capable of insertion  
17 into the central opening of the retainer bracket adjacent the flange of the stationary  
18 plate such that the lock plate is substantially immobilized in the closed position.

19           9.     The locking apparatus of claim 8 wherein said hasp is further capable  
20 of capturing the handle of the gooseneck trailer hitch.

21           10.    The locking apparatus of claim 8 wherein said hasp comprises a pair of  
22 connected legs spaced apart by a width of about one inch, each of said legs having a  
23 diameter of about 7/16 inch, said hasp and said body defining an interior space  
24 having a length of about 1 ¾ inches when said lock is in its locked position.

25           11.    The locking apparatus of claim 8 wherein said hasp comprises a pair of  
26 connected legs spaced apart by a width of about 1 ¾ inches, each of said legs having

1 a diameter of about 7/16 inch, said hasp and said body defining an interior space  
2 having a length of about 4 ½ inches when said lock is in its locked position.  
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1           12. A method of locking a gooseneck trailer hitch, the gooseneck trailer  
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the  
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball  
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally  
5 connected to the stationary plate, the lock plate having a second aperture for  
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the  
7 retainer bracket having a central opening in which the flange of the stationary  
8 plate is slidably disposed, the retainer bracket further having a third aperture for  
9 receiving a latch pin, a handle guide depending from the sheathing member, a  
10 handle slidably disposed in the handle guide, the handle having a latch pin capable  
11 of insertion into the first aperture of the stationary plate and the third aperture of  
12 the retainer bracket to immobilize the lock plate in a closed position in which the  
13 second aperture of the lock plate is partially misaligned with the cavity of the  
14 stationary plate such that a hitch ball is prevented from being inserted into or  
15 removed from the cavity, said method comprising:

16           placing the lock plate in the closed position;

17           inserting a lock pin into the central opening of the retainer bracket, the lock  
18 pin having a shaft and an eyelet, said shaft being at least partially disposed within  
19 the central opening of the retainer bracket;

20           positioning the handle of the gooseneck trailer hitch in close proximity to  
21 said eyelet;

22           providing a lock having a hasp;

23           passing said hasp through said eyelet and the handle of the gooseneck trailer  
24 hitch; and

25           closing said hasp such that said shaft is not removable from the central  
26 opening of the retainer bracket and the lock plate is substantially immobilized in  
27 the closed position.

1           13.    The method of claim 12 further comprising the step of forming a fourth  
2 aperture in the retainer bracket, said fourth aperture providing access into the  
3 central opening of the retainer bracket;

4           wherein said shaft comprises a bend; and

5           wherein said inserting step comprises inserting said shaft through said  
6 fourth aperture into the central opening of the retainer bracket such that said bend  
7 prevents removal of said shaft from the retainer bracket when said hasp is closed.

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FOOTNOTES



1           14. A method of locking a gooseneck trailer hitch, the gooseneck trailer  
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the  
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball  
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally  
5 connected to the stationary plate, the lock plate having a second aperture for  
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the  
7 retainer bracket having a central opening in which the flange of the stationary  
8 plate is slidably disposed, the retainer bracket further having a third aperture for  
9 receiving a latch pin, a handle guide depending from the sheathing member, a  
10 handle slidably disposed in the handle guide, the handle having a latch pin capable  
11 of insertion into the first aperture of the stationary plate and the third aperture of  
12 the retainer bracket to immobilize the lock plate in a closed position in which the  
13 second aperture of the lock plate is partially misaligned with the cavity of the  
14 stationary plate such that a hitch ball is prevented from being inserted into or  
15 removed from the cavity, and a cover plate depending from the sheathing member  
16 and enshrouding the handle guide, the cover plate having a first wall and a second  
17 wall, said method comprising:

18           forming a fourth aperture in the first wall of the cover plate;

19           forming a fifth aperture in the second wall of the cover plate, said fifth  
20 aperture being generally aligned with said fourth aperture;

21           placing the lock plate in the closed position;

22           providing a lock pin having a shaft and an eyelet;

23           inserting said shaft through said fourth and fifth apertures;

24           positioning the handle of the gooseneck trailer hitch in close proximity to  
25 said eyelet;

26           providing a lock having a hasp;

1            passing said hasp through said eyelet and the handle of the gooseneck trailer  
2    hitch; and  
3            closing said hasp such that said shaft is not removable from said fourth and  
4    fifth apertures and the lock plate is substantially immobilized in the closed  
5    position.  
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FOOTNOTES

1           15.    A method of locking a gooseneck trailer hitch, the gooseneck trailer  
2 hitch having a tubular sheathing member, a stationary plate fixedly attached to the  
3 sheathing member, the stationary plate having a cavity for receiving a hitch ball  
4 and a flange with a first aperture for receiving a latch pin, a lock plate pivotally  
5 connected to the stationary plate, the lock plate having a second aperture for  
6 receiving a hitch ball, a retainer bracket fixedly attached to the lock plate, the  
7 retainer bracket having a central opening in which the flange of the stationary  
8 plate is slidably disposed, the retainer bracket further having a third aperture for  
9 receiving a latch pin, a handle guide depending from the sheathing member, a  
10 handle slidably disposed in the handle guide, the handle having a latch pin capable  
11 of insertion into the first aperture of the stationary plate and the third aperture of  
12 the retainer bracket to immobilize the lock plate in a closed position in which the  
13 second aperture of the lock plate is partially misaligned with the cavity of the  
14 stationary plate such that a hitch ball is prevented from being inserted into or  
15 removed from the cavity, said method comprising:

16               placing the lock plate in the closed position;  
17               providing a lock having a hasp;  
18               inserting said hasp into the central opening of the retainer bracket adjacent  
19 the flange of the stationary plate; and  
20               closing said hasp such that the lock plate is substantially immobilized in the  
21 closed position.  
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